MontCAS

Guide to the 2009 Criterion-Referenced Test and CRT-Alternate Assessment Reports

Important Phone Numbers

If you require assistance, it's readily available through the offices listed below.

- **For information about program policy issues or incorrect data, contact:**
  Judy Snow, State Assessment Director
  Phone: (406) 444-3656
  E-mail: jsnow@mt.gov

- **For information about CRT program administration or shipping issues, contact:**
  Dan Verdick, Montana CRT Program Manager
  Phone: (800) 431-8901, Extension 2220
  E-mail: verdick.dan@measuredprogress.org

- **For information on CRT-Alternate policy issues, contact:**
  Timothy Harris
  PI Division of Special Education
  Phone: (406) 444-4429
  E-mail: tharris@mt.gov

- **For information about CRT-Alternate program administration or shipping issues, contact:**
  Lynn Albee, Montana CRT-Alternate Program Manager
  Phone: (800) 431-8901, Extension 2309
  E-mail: albee.lynn@measuredprogress.org

- **For information about ELL/LEP, contact:**
  Lynn Hinch, OPI
  Phone: (406) 444-3482
  E-mail: lhinch@mt.gov

- **For information about Title I, contact:**
  B.J. Granbery, OPI
  Phone: (406) 444-4420
  E-mail: bgranbery@mt.gov

- **For information about students with migrant status, contact:**
  Angela Branz-Spall, OPI
  Phone: (406) 444-2423
  E-mail: angelab@mt.gov

opi.mt.gov

Montana
Office of Public Instruction
Denise Juneau, State Superintendent

The primary purpose of this guide is to support local educators' use of test data to better serve the academic needs of students and to evaluate and improve curriculum and instruction. We hope you find this guide useful as you review the results for your school or system.

If you have any suggestions about ways in which we can improve this guide in future years or if you have questions after reviewing this guide or its reports, please contact Judy Snow, State Assessment Director, Office of Public Instruction (OPI) at (406) 444-3656 or jsnow@mt.gov.

Additional information about the Criterion-Referenced Test (CRT) and the CRT-Alternate Assessment, including Montana's content standards, can be found in Appendix A of this manual and on OPI's Web site, www.opi.mt.gov.

Table of Contents

The Test

The Criterion-Referenced Test (CRT) and the CRT-Alternate Assessment are designed to measure student acquisition of the knowledge and skills in Montana's content standards for reading, mathematics, and science. The assessments in reading, mathematics, and science were developed to provide information at the student, class, school, and system level.

Basis for Results

CRT

In the CRT, the pool of test items in each grade and subject area was divided into two categories:

1. The first category of items is common items that appeared in all forms of the test and were completed by all students. Student, school, system, and state results are based only on these common items; 50% of math and reading and 50% of science are released annually at the time the reports are shipped to system test coordinators and posted on the Office of Public Instruction (OPI) Web site (www.opi.state.mt.gov).

2. The second category of items is field test items. The remaining items in a grade/subject area were divided among eight different forms of each test; each student completed one form. These items are called field test items. A portion of the 2009 field test items will become the set of common items in spring 2010.

CRT-Alternate Assessment

The CRT-Alternate Assessment is a point-in-time test that examined how students performed in relation to performance indicators that were expanded from the Montana reading, mathematics, and science standards and benchmarks. Students participated in a series of age-appropriate short activities consisting of five or six test items each for which test administrators were given a script, written directions, and scaffolding levels. Students were encouraged to engage in the activities and showed performance on the indicators through appropriate prompting by the test administrator.

The test administrator observed and scored the student's performance on each indicator. Required evidence was collected based on the student's performance during the course of the assessment. Templates were provided for all evidence that was required.

Minimum Number of Students Needed to Generate Reports

To ensure confidentiality of individual student results and to discourage generalizations about school performance based on very small populations, OPI has established 10 as the minimum number of students for which performance-level results are reported in any particular subgroup. Only the number of students ("N") in each subgroup are reported on the system and school reports.

Consequently, schools with a very small number of students enrolled in a grade that

was tested may not show performance-level results in some sections of their school report. A school report was generated for any school that tested fewer than 10 students in a particular grade, and results for these students are included in system- and/or state-level results.

Students Eligible for Exclusion from School, System, and State Reports

All students in accredited schools are required to participate in either the CRT or the CRT-Alternate Assessment; however, the scores of the students in the following categories were excluded from the calculation of averages:

- LEP students enrolled for the first time in a U.S. school,
- foreign exchange students,
- students not enrolled (for example, home-schooled students),
- students enrolled less than 180 hours and taking a reading, mathematics, or science course,
- students enrolled in a private accredited school,
- students enrolled in a private non-accredited school, and
- students enrolled in a private non-accredited Title 1 school.

The Scores

Two types of scores are used to report performance on the CRT and the CRT-Alternate Assessment—scaled scores and percentages.

Scaled Scores

Results are reported according to levels that describe student performance in relation to Montana's established state standards: Advanced (A), Proficient (P), Nearing Proficiency (NP), and Novice (N). Scaled scores in each content area range from 200 to 300. Scaled scores supplement the performance-level results by providing information about the position of a student's results within a performance level.

School- and system-level scaled scores are calculated by computing the average of student-level scaled scores. Students' total number of points on the test are translated into scaled scores using a data-analysis process called scaling. Using scaled scores greatly simplifies the task of understanding how a student performed. Scaled scores are calculated along with a standard error of measurement (indicated on the chart by a gray bar surrounding the student's score), representing the probable range of scores for the student if he or she were to take the test many times.

Percentages

Percentages are another way to report the results of the test. "Percentage" refers to the percentage of questions answered correctly; the percent correct is simply the percentage of test questions that each student answered correctly.

It is important to note that the "percentage" correct does not directly correlate to the scale score. For more information, see Appendix A.

CRT and CRT-Alternate Reports

The following reports of student, school, and system results are each provided for the CRT and the CRT-Alternate Assessment.

Report	Description	Explanation and sample can be found in this interpretive guide on page(s):	Method of Delivery
Student Report	This parent/guardian report provides each student's scores for the reading, mathematics, and science tests.	CRT: 4–5 CRT-ALT: 13–14	Hard copy shipped to system test coordinator
Roster & Item-Level Report	This report provides information about class performance. Each student in the class is listed on the roster, which includes references to each item and the standard it measures.	CRT: 6 CRT-ALT: 15	MARS*
School Summary Report	This three-part summary shows the distribution of scores in each Montana performance level by subgroup, school, system, and state for students enrolled in the school or system for the entire academic school year.	CRT: 7–9 CRT-ALT: 16–18	MARS
System Summary Report	This two-part summary shows the distribution of scores in each Montana performance level by subgroup, system, and state for students enrolled in the school or system for the entire academic school year.	CRT: 7–9 CRT-ALT: 16–18 Separate sample not included. See School Summary Report sample.	MARS

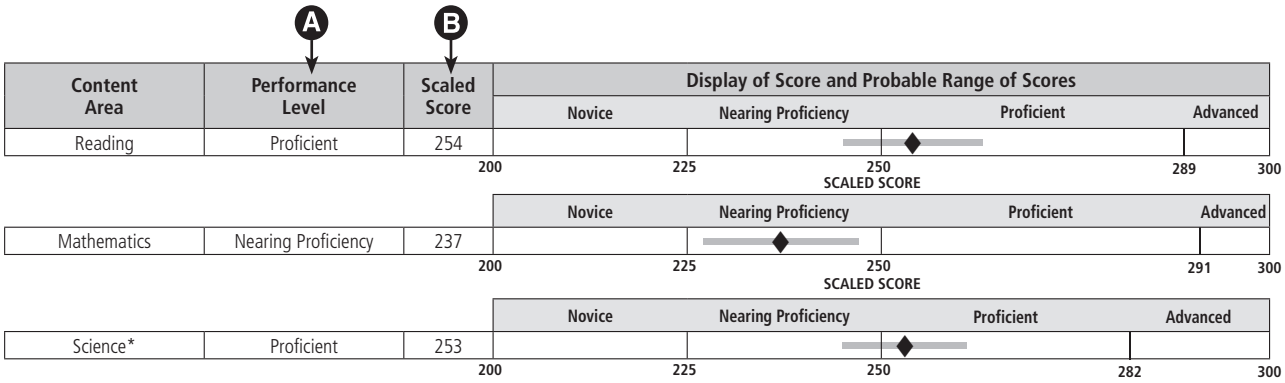
*MARS (the Montana Analysis and Reporting System) is the secure online reporting system used for delivery of CRT and CRT-Alternate test results. If you need assistance accessing MARS, contact the OPI assessment staff. (Contact information is provided on the inside of the cover page of this document.)

Part I: The CRT Reports

CRT Student Report

This parent/guardian report provides each student's scores for the reading, mathematics, and science tests. The chart on the back of the Student Report, "Scaled Scores on the CRT," reflects the student's performance level—Ⓐ—and scaled score—Ⓑ—for reading, mathematics, and science. The gray bar surrounding the student's score represents the standard error of measurement. Please refer to the performance-level descriptors on the front of the Student Report or on page 10 in this guide for additional information and resources.

Scaled Scores on the CRT



* Science is assessed at grades 4, 8, and 10 only.

Contact your student's school or the state assessment director for more information about the following symbols:

† Student did not complete the assessment.
§ Student participated with a non-standard accommodation.
** Student did not participate.
¥ A test administration irregularity has affected your student's results.

The chart on the back of the Student Report, "This Student's Performance in Content Standards," shows the standard for each content area assessed—C, points possible for the number of items (or questions) given—D, the student percentage—E, and the state percentage—F.

This Student's Performance in Content Standards

Scores on Montana Content Standards

CRT results are reported for Montana Content Standards in reading, mathematics, and science* to provide standard-specific information about the student's achievement. The results can be used to show the student's relative performance on the standards within a content area.

Reading	Total Possible Points (D)	Student % of Points Earned (E)	Points Earned (F) Average State %
Standard 1 (C)	20	40	64
Standard 2	21	71	65
Standard 3	This standard is not measurable in a statewide assessment.		
Standard 4	10	40	65
Standard 5	9	33	66

Science*	Total Possible Points	Student % of Points Earned	Points Earned Average State %
Standard 1	14	64	65
Standard 2	14	50	58
Standard 3	14	64	74
Standard 4	14	79	67
Standard 5	Sub scores are not reported for this standard.		
Standard 6	Sub scores are not reported for this standard.		

Note: The points earned on the indicated standards cannot be added together to equal the scaled score.

Mathematics	Total Possible Points	Student % of Points Earned	Points Earned Average State %
Standard 1	This standard is assessed within the frameworks of standards 2-7.		
Standard 2	22	36	67
Standard 3	8	75	69
Standard 4	10	60	61
Standard 5	10	60	58
Standard 6	8	50	57
Standard 7	8	38	67

The standards for each content area can be found on the front of this report.

* Science is assessed at grades 4, 8, and 10 only.

Contact your student's school or the state assessment director for more information about the following symbols:

† Student did not complete the assessment.
§ Student participated with a non-standard accommodation.
** Student did not participate.
¥ A test administration irregularity has affected your student's results.

CRT Roster & Item-Level Report

The Roster & Item-Level Report is presented by content area, and can be found on the Montana Analysis and Reporting System (MARS). It provides information about student and class performance and can be viewed online or downloaded in a variety of formats. Each student in the class is listed on the roster. Each released item on the test—A; the Montana content standard each item is measuring—B; the answer key—C; and the total number of possible points—D—are presented along the top of the roster. Beside the name of the student is the response the student chose for the item if the item was answered incorrectly—E. If the item was answered correctly, a plus sign is printed. The two columns on the right present the scaled score (SS) for each student—F—and the performance level (PL)—G—the student attained.

When the report is downloaded in PDF format, it lists the average scores for students in the class—H, school—I, system—J, and state—K—who answered each item correctly. A legend, with performance-level descriptors, is located on page 10 in this guide.

READING/MATH
Roster & Item-Level Report
Confidential

Name	A → Release Item	1	2									SS (F)	PL (G)
	B → Standard	2	3										
	C → Key	A	B										
	D → Points Possible	1	1										
Jane Doe	E →	C	D									200	N
Mike Smith		+	+									210	N
H → Percent Correct/Avg. Score: Group*		50	61										
I → Percent Correct/Avg. Score: School*		53	58										
J → Percent Correct/Avg. Score: System*		48	56										
K → Percent Correct/Avg. Score: State*		51	58										

* Some students were excluded from aggregations (averages) pursuant to Decision Rules.

CRT School and System Summary Reports

The School and System Summary Reports are presented by content area and provide information at the school and system level. These reports can be found on MARS. The first chart, "Distribution of Scores" —**A**, shows the distribution of scores in each performance level: Advanced (A), Proficient (P), Nearing Proficiency (NP), and Novice (N). The first column, "Scores" —**B**, represents the scaled score.

The "School," "System," and "State" columns are each divided into three columns that represent the number of students ("N") and the percentage of students receiving each scaled score point—**C**. The last column, "% of Students in Cat."—**D**, represents the total percentage of students within the designated performance level.

The second chart, "Subtest Results"—**E**, reports the total points and average points earned for each content standard.

The third chart, "Results for Subgroups of Students"—**F**, disaggregates student data in several ways—by gender, ethnicity, school programs, and so on. This data helps measure the effectiveness of instructional programs for different groups in a school. In addition, subgroup data identifies instructional practices and program characteristics that may be more effective. Finally, subgroup data enables educators to identify factors that appear to relate to performance, and to compare students statewide with respect to those factors.

Performance-level results were not reported if fewer than 10 students were assessed. Only the number of students ("N") in each category with fewer than 10 students assessed was reported.

MontCAS CRT

School: Demonstration School 2
System: Demonstration District A
Grade: 04
Spring 2009

Mathematics

School Summary Report

I. Distribution of Scores

Perf. Level	Scores	School			System			State		
		N	% of Students	% of Students in Cat.	N	% of Students	% of Students in Cat.	N	% of Students	% of Students in Cat.
Advanced	299-300	40	25	29	89	23	28	2225	21	28
	297-298	0	0		0	0		0	0	
	295-296	2	1		8	2		345	3	
	293-294	4	3		13	3		359	3	
	291-292	0	0		0	0		0	0	
Proficient	283-290	11	7	41	34	9	38	981	9	39
	275-282	15	9		30	8		648	6	
	266-274	20	13		43	11		949	9	
	258-265	11	7		28	7		935	9	
	250-257	8	5		16	4		569	5	
Nearing Proficiency	245-249	5	3	15	19	5	19	492	5	18
	240-244	7	4		20	5		450	4	
	235-239	2	1		6	2		201	2	
	230-234	6	4		16	4		392	4	
	225-229	4	3		15	4		348	3	
Novice	220-224	4	3	15	12	3	14	305	3	15
	215-219	3	2		4	1		132	1	
	210-214	3	2		9	2		259	2	
	205-209	4	3		5	1		216	2	
	200-204	9	6		26	7		633	6	

II. Subtest Results

Mathematics		Possible Points	Average Points Earned		
			School	System	State
Total Points		66	43	42	42
Standards	1. Problem Solving	This standard is assessed within the frameworks of standards 2-7.			
	2. Numbers and Operations	22	15	15	15
	3. Algebra	8	6	5	5
	4. Geometry	10	6	6	6
	5. Measurement	10	6	6	6
	6. Data Analysis, Statistics, and Probability	8	5	5	5
	7. Patterns, Relations, and Functions	8	5	5	5

CRT Performance Level Descriptors

Advanced (291-300)
This level denotes superior performance.

Proficient (250-290)
This level denotes solid academic performance for each benchmark. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.

Nearing Proficiency (225-249)
This level denotes that the student has partial mastery or prerequisite knowledge and skills fundamental for proficient work at each benchmark.

Novice (200-224)
This level denotes that the student is beginning to attain the prerequisite knowledge and skills that are fundamental for work at each benchmark.

DEMOADEMO2

MontCAS CRT

Confidential

Mathematics **School Summary Report**

School: Demonstration School 2
System: Demonstration District A
Grade: 04
Spring 2009

III. Results for Subgroups of Students

Reporting Category	School					System					State				
	Number	% in N	% in NP	% in P	% in A	Number	% in N	% in NP	% in P	% in A	Number	% in N	% in NP	% in P	% in A
All Students	158	15	15	41	29	393	14	19	38	28	10439	15	18	39	28
Gender															
Male	72	14	17	40	29	198	14	20	38	27	5406	15	17	38	30
Female	84	15	14	43	27	188	14	18	39	29	5033	15	19	40	26
Ethnicity															
American Indian or Alaska Native	26	46	23	31	0	49	41	22	31	6	1312	33	25	31	11
Asian	2	*	*	*	*	2	*	*	*	*	83	13	7	36	43
Hispanic	5	*	*	*	*	7	*	*	*	*	294	19	25	38	18
Black or African American	2	*	*	*	*	2	*	*	*	*	132	23	14	42	20
Native Hawaiian or Other Pacific Islander	1	*	*	*	*	1	*	*	*	*	25	4	8	36	52
White	120	8	13	46	33	324	10	18	41	31	8593	12	17	40	31
Special Education	21	43	14	33	10	43	40	26	30	5	1168	44	20	26	10
Students with a 504 Plan	1	*	*	*	*	2	*	*	*	*	40	33	28	30	10
Title I (optional)	61	20	25	36	20	145	23	26	32	19	4125	22	22	34	21
Tested with Standard Accommodation	34	26	18	41	15	87	28	29	37	7	2012	35	25	29	11
Tested with Non-Standard Accommodation	1	*	*	*	*	1	*	*	*	*	19	63	37	0	0
Alternate Assessment	4	If a student in your system or school took the CRT-Alternate, please refer to Table III on the CRT-Alternate System or School Summary Report													
Migrant	0	*	*	*	*	1	*	*	*	*	27	7	30	52	11
Gifted/Talented	8	*	*	*	*	21	0	0	14	86	615	0	2	19	80
LEP/ELL	7	*	*	*	*	16	75	13	13	0	373	52	24	19	4
Former LEP Student	2	*	*	*	*	2	*	*	*	*	129	30	33	28	9
LEP Student Enrolled for First Time in a U.S. School	1	Performance levels are not reported for 1st year LEP students													
Free/Reduced Lunch	63	24	21	35	21	156	23	22	37	18	4347	22	23	37	18
Significant Cognitive Disability															
Special Education Disability(ies):															
Autism															
Cognitive Delay															
Deaf-Blindness Impairment															
Deafness															
Emotional Disturbance															
Hearing Impairment															
Learning Disability															
Other Health Impairment															
Orthopedic Impairment															
Speech/Language															
Traumatic Brain Injury															
Visual Impairment															

Data not available for the 2009 report

*Less than ten (10) students were assessed

CRT Performance-Level Descriptors

Advanced

This level denotes superior performance.

Proficient

This level denotes solid academic performance for each benchmark. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.

Nearing Proficiency

This level denotes that the student has partial mastery or prerequisite knowledge and skills fundamental for proficient work at each benchmark.

Novice

This level denotes that the student is beginning to attain the prerequisite knowledge and skills that are fundamental for work at each benchmark.

The above performance-level descriptors are general across all grades and content areas. Performance-level descriptors by grade were reviewed and revised for mathematics and reading during standard setting in the summer of 2006. Performance-level descriptors by grade for science were reviewed and revised during standard setting in the spring of 2008. Performance-level descriptors are available online at www.opi.state.mt.gov/assessment.

CRT Scaled Score Ranges for Performance Levels

Grade 3

Performance Level	Reading	Mathematics
Advanced	287–300	290–300
Proficient	250–286	250–289
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 4

Performance Level	Reading	Mathematics	Science
Advanced	289–300	291–300	281–300
Proficient	250–288	250–290	250–280
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Grade 5

Performance Level	Reading	Mathematics
Advanced	287–300	289–300
Proficient	250–286	250–288
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 6

Performance Level	Reading	Mathematics
Advanced	289–300	287–300
Proficient	250–288	250–286
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 7

Performance Level	Reading	Mathematics
Advanced	288–300	289–300
Proficient	250–287	250–288
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 8

Performance Level	Reading	Mathematics	Science
Advanced	289–300	283–300	283–300
Proficient	250–288	250–282	250–282
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Grade 10

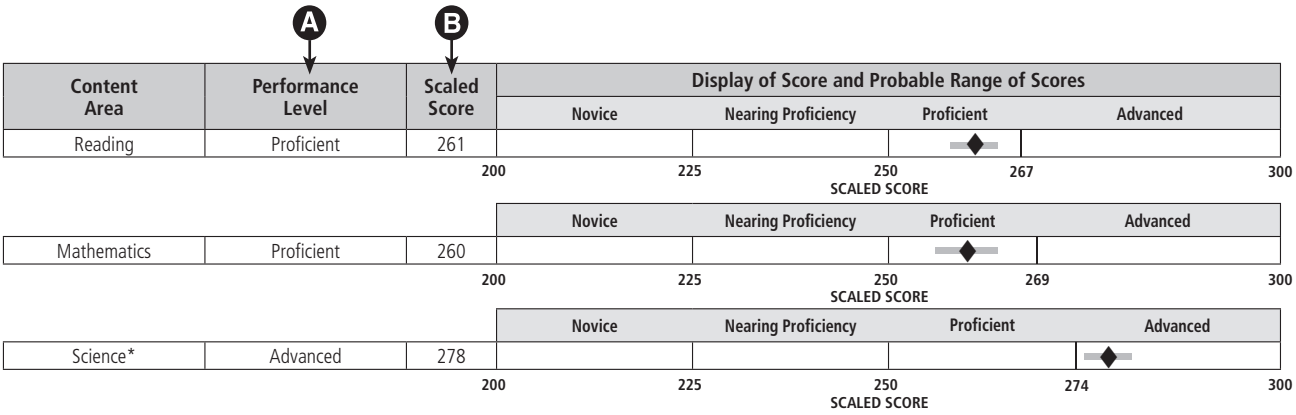
Performance Level	Reading	Mathematics	Science
Advanced	289–300	281–300	269–300
Proficient	250–288	250–280	250–268
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Part II: The CRT-Alternate Reports

CRT-Alternate Student Report

This parent/guardian report provides each student's scores for the reading, mathematics, and science tests. The chart on the back of the Student Report, "Scaled Scores on the CRT-Alternate," reflects the student's performance level—Ⓐ—and scaled score—Ⓑ—for reading, mathematics, and science. The gray bar surrounding the student's score represents the standard error of measurement. Please refer to the performance-level descriptors on the front of the Student Report or on page 19 in this guide for additional information and resources.

Scaled Scores on the CRT-Alternate



The chart on the back of the Student Report, "This Student's Performance in Content Standards," shows the standard for each content area assessed—C, points possible for the number of items (or questions) given—D, the student percentage—E, and the state percentage—F.

This Student's Performance in Content Standards

Scores on Montana Content Standards

CRT-Alternate results are reported for Montana Content Standards in reading, mathematics, and science* to provide standard-specific information about the student's achievement. The results can be used to show the student's relative performance on the standards within a content area.

Reading	Total Possible Points D	Student % of Points Earned E	Points Earned F Average State %
Standard 1 C	36	94	92
Standard 2	48	81	79
Standard 3	This standard is not measurable in a statewide assessment.		
Standard 4	12	100	79
Standard 5	4	100	89

Science*	Total Possible Points	Student % of Points Earned	Points Earned Average State %
Standard 1	4	50	76
Standard 2	32	100	86
Standard 3	20	90	83
Standard 4	36	100	88
Standard 5	Sub scores are not reported for this standard.		
Standard 6	Sub scores are not reported for this standard.		

Note: The points earned on the indicated standards cannot be added together to equal the scaled score.

Mathematics	Total Possible Points	Student % of Points Earned	Points Earned Average State %
Standard 1	This standard is assessed within the frameworks of standards 2-7.		
Standard 2	32	78	78
Standard 3	0		
Standard 4	0		
Standard 5	0		
Standard 6	32	91	72
Standard 7	16	75	76

The standards for each content area can be found on the front of this report.

* Science is assessed at grades 4, 8, and 10 only.

Contact your student's school for more information about the following symbols:

† Student did not complete the assessment.

** Student did not participate.

CRT-Alternate Roster & Item-Level Report

The Roster & Item-Level Report is presented by content area and can be found on MARS. It provides information about class performance. Each student in the class is listed on the roster. Each item (performance indicator) on the test—A, the Montana content standard each item is measuring—B, and the total number of possible points (four for every item)—C—are presented along the top of the roster. Beside the name of the student is the score the student received for each item—D.

The two columns on the right present the scaled score for each student—E—and the performance level—F—the student attained. The end of the report lists the item average for students in the class—G, school—H, system—I, and state—J—who answered each item. A legend, with performance-level descriptors, is located on page 19 in this guide.

Reading
Roster & Item-Level Report
Confidential

Class: DEM
School: Demonstration School
System: Demonstration District
Grade: 04

Spring 2009

	Tasklet 1					Tasklet 2					Tasklet 3					Tasklet 4					Tasklet 5					E	F
A Item Number	01	02	03	04	05	01	02	03	04	05	01	02	03	04	05	01	02	03	04	05	01	02	03	04	05	Scaled Score	Perf. Level
B Standard	1	1	1	2	2	1	1	4	4	4	1	2	2	2	2	1	1	2	2	2	1	2	5	2	2		
C Name / Total Possible Points	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
KLIMOVICH, DANIEL (D)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	4	4	4	4	4	269	A
LAPE, JOSHUA	4	4	4	4	4	4	4	4	4	4	4	2	2	4	4	4	4	4	4	4	4	3	4	4	4	267	A
POTRATZ, CONNER	4	4	4	4	4	4	4	2	4	4	4	3	3	4	4	4	4	3	4	3	4	4	4	4	3	265	P
TELESH, DAMON	4	4	2	2	4	4	1	3	3	3	4	2	4	1	4	0	2	3	2	2	4	1	2	1	2	238	NP
G Class Average	3.9	3.4	2.8	3.4	3.4	3.9	3.2	3.3	3.1	2.8	4	2.3	2.9	3.1	3.6	3.8	3.3	2.5	2.9	3.2	4	3.1	3.6	3.1	3.2		
H School Average	4	4	3	3	4	4	2.5	2.5	3.5	3.5	4	2.5	3.5	2.5	4	2	3	3	3	2.5	4	2.5	3	2.5	2.5		
I System Average	3.9	3.4	2.8	3.4	3.4	3.9	3.2	3.3	3.1	2.8	4	2.3	2.9	3.1	3.6	3.8	3.3	2.5	2.9	3.2	4	3.1	3.6	3.1	3.2		
J State Average	4	3.6	3.2	3.6	3.4	4	3.5	3.4	3.2	3	4	2.7	3.2	3.3	3.6	3.9	3.5	2.9	3	3.2	4	3.4	3.6	3.3	3.4		

CRT-Alternate School and System Summary Reports

The School and System Summary Reports are presented by content area and provide information at the school and system level. These reports can be found on MARS.
The first chart, "Distribution of Scores"—**A**, shows the distribution of scores in each performance level: Advanced (A), Proficient (P), Nearing Proficiency (NP), and Novice (N).
The first column, "Scores"—**B**, represents the scaled score.

The "School," "System," and "State" columns are each divided into three columns that represent the number of students ("N") and the percentage of students receiving each scaled score point—**C**. The last column, "% of Students in Cat."—**D**, represents the total percentage of students within the designated performance level.

The second chart, "Subtest Results"—**E**, reports the total points and average points earned for each content standard.

The third chart, "Results for Subgroups of Students"—**F**, disaggregates student data in several ways—by gender, ethnicity, school programs, and so on. This data helps measure the effectiveness of instructional programs for different groups in a school. In addition, subgroup data identifies instructional practices and program characteristics that may be more effective. Finally, subgroup data enables educators to identify factors that appear to relate to performance, and to compare students statewide with respect to those factors.

Performance-level results were not reported if fewer than 10 students were assessed. Only the number of students ("N") in each category with fewer than 10 students assessed was reported.

MontCAS CRT-Alternate

School: Demonstration School
System: Demonstration District
Grade: 04
Spring 2009

Reading

School Summary Report

A → I. Distribution of Scores

Perf. Level	Scores	School			System			State		
		N	% of Students	% of Students in Cat.	N	% of Students	% of Students in Cat.	N	% of Students	% of Students in Cat.
Advanced	294-300	0	0		1	3		8	8	
	287-293	0	0		0	0		0	0	
	281-286	0	0	0	0	0	23	0	0	32
	274-280	0	0		0	0		0	0	
	267-273	0	0		8	21		22	23	
Proficient	264-266	1	50		6	15		17	18	
	260-263	0	0		5	13		12	13	
	257-259	0	0	50	1	3	46	5	5	46
	253-256	0	0		6	15		8	8	
	250-252	0	0		0	0		2	2	
Nearing Proficiency	245-249	0	0		3	8		6	6	
	240-244	0	0		1	3		4	4	
	235-239	1	50	50	1	3	21	2	2	16
	230-234	0	0		2	5		2	2	
	225-229	0	0		1	3		1	1	
Novice	220-224	0	0		0	0		0	0	
	215-219	0	0		1	3		3	3	
	210-214	0	0	0	0	0	10	0	0	6
	205-209	0	0		0	0		0	0	
	200-204	0	0		3	8		3	3	

B C D C D C D

E → II. Subtest Results

Reading		Possible Points	Average Points Earned		
			School	System	State
Total Points*		100	79	79	84
Standards	1. Students construct meaning as they comprehend, interpret, and respond to what they read	36	31	31	33
	2. Students apply a range of skills and strategies to read	48	36	35	38
	3. Students set goals, monitor, and evaluate their reading progress	This standard is not measurable in a statewide assessment.			
	4. Students select, read, and respond to print and nonprint material for a variety of purposes	12	10	9	9
	5. Students gather, analyze, synthesize, and evaluate information from a variety of sources, and communicate their findings in ways appropriate for their purposes and audiences	4	--	--	--

--There were too few score points to report on this standard, or no items on the test measured this standard.

CRT-Alternate Performance Level Descriptors

Advanced (267-300)
The student at the Advanced level accurately and independently demonstrates the ability to carry out comprehensive content specific performance indicators.

Proficient (250-266)
The student at the Proficient level, given limited prompting, demonstrates the ability to respond accurately in performing a wide variety of content specific performance indicators.

Nearing Proficiency (225-249)
The student at the Nearing Proficiency level, given moderate prompting, demonstrates the ability to respond accurately in performing a narrow set of content specific performance indicators.

Novice (200-224)
The student at the Novice level, given physical assistance and/or modeling, is supported to participate in content specific performance indicators.

*The sum of the points for each standard may exceed the total points, as some items correlate with more than one standard.

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MontCAS CRT-Alternate

Confidential

Reading

School Summary Report

School: Demonstration School
System: Demonstration District
Grade: 04
Spring 2009

III. Results for Subgroups of Students

Reporting Category	School					System					State				
	Number	% in N	% in NP	% in P	% in A	Number	% in N	% in NP	% in P	% in A	Number	% in N	% in NP	% in P	% in A
All Students	2	*	*	*	*	39	10	21	46	23	95	6	16	46	32
Gender															
Male	2	*	*	*	*	30	7	23	47	23	64	3	20	50	27
Female	0	*	*	*	*	9	*	*	*	*	31	13	6	39	42
Ethnicity															
American Indian or Alaska Native	0	*	*	*	*	6	*	*	*	*	18	6	11	56	28
Asian	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
Hispanic	0	*	*	*	*	2	*	*	*	*	2	*	*	*	*
Black or African American	0	*	*	*	*	0	*	*	*	*	1	*	*	*	*
Native Hawaiian or Other Pacific Islander	0	*	*	*	*	1	*	*	*	*	1	*	*	*	*
White	2	*	*	*	*	30	13	23	47	17	73	7	18	44	32
Special Education	1	*	*	*	*	38	11	21	45	24	94	6	16	46	32
Students with a 504 Plan	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
Title I (optional)	0	*	*	*	*	16	6	19	38	38	36	3	14	47	36
Tested with Standard Accommodation	0	*	*	*	*	5	*	*	*	*	7	*	*	*	*
Tested with Non-Standard Accommodation	2	*	*	*	*	5	*	*	*	*	9	*	*	*	*
Alternate Assessment	2	*	*	*	*	39	10	21	46	23	95	6	16	46	32
Migrant	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
Gifted/Talented	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
LEP/ELL	0	*	*	*	*	3	*	*	*	*	5	*	*	*	*
Former LEP Student	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
LEP Student Enrolled for First Time in a U.S. School	0	Performance levels are not reported for 1st year LEP students													
Free/Reduced Lunch	0	*	*	*	*	24	13	8	54	25	69	6	9	51	35
Significant Cognitive Disability															
Special Education Disability(ies):															
Autism															
Cognitive Delay															
Deaf-Blindness Impairment															
Deafness															
Emotional Disturbance															
Hearing Impairment															
Learning Disability															
Other Health Impairment															
Orthopedic Impairment															
Speech/Language															
Traumatic Brain Injury															
Visual Impairment															

Data not available for the 2009 report

*Less than ten (10) students were assessed

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CRT-Alternate Performance-Level Descriptors

Advanced

The student at the Advanced level accurately and independently demonstrates the ability to carry out comprehensive content-specific performance indicators.

Proficient

The student at the Proficient level, given limited prompting, demonstrates the ability to respond accurately in performing a wide variety of content-specific performance indicators.

Nearing Proficiency

The student at the Nearing Proficiency level, given moderate prompting, demonstrates the ability to respond accurately in performing a narrow set of content-specific performance indicators.

Novice

The student at the Novice level, given physical assistance and/or modeling, is supported to participate in content-specific performance indicators.

The above performance-level descriptors are general across all grades and content areas. Performance-level descriptors for each grade and content area were reviewed and revised throughout a series of standard-setting meetings that occurred between 2006 and 2009. Performance-level descriptors are available online at www.opi.state.mt.gov/assessment.

CRT-Alternate Scaled Score Ranges for Performance Levels

Grade 3

Performance Level	Reading	Mathematics
Advanced	265–300	269–300
Proficient	250–264	250–268
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 4

Performance Level	Reading	Mathematics	Science
Advanced	267–300	269–300	274–300
Proficient	250–266	250–268	250–273
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Grade 5

Performance Level	Reading	Mathematics
Advanced	263–300	297–300
Proficient	250–262	250–296
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 6

Performance Level	Reading	Mathematics
Advanced	275–300	258–300
Proficient	250–274	250–257
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 7

Performance Level	Reading	Mathematics
Advanced	277–300	275–300
Proficient	250–276	250–274
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 8

Performance Level	Reading	Mathematics	Science
Advanced	275–300	278–300	271–300
Proficient	250–274	250–277	250–270
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Grade 10

Performance Level	Reading	Mathematics	Science
Advanced	283–300	261–300	269–300
Proficient	250–282	250–260	250–268
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Appendix A

Overview of Assessment Instruments and Procedures
MontCAS CRT and CRT-Alternate of 2009

Montana Educator Involvement in Test Development

Montana educators were actively involved in each aspect of test development—from the development of *MontCAS Comprehensive Assessment System Grade Level Expectations (GLEs)* to the review of all passages and items for bias and sensitivity issues, as well as review of all items for purposes of alignment, depth of knowledge, age appropriateness, and accuracy of content. Standards were set for both the CRT and the CRT-Alternate by committees comprised of Montana educators. Standards for math and reading were set during the summer of 2006. Standards for science were set in the spring of 2008.

Grade-Level Learning Expectations Development

OPI developed GLEs in mathematics, reading, and science in response to the requirements of the federally mandated *No Child Left Behind Act of 2001* to test all students, beginning in the 2005–2006 academic year, in each of grades 3–8 and 10 in mathematics and reading. Science was included in the test beginning in the spring of 2008. Although these sets of GLEs were developed for this purpose, the intent was to build coherent sets of expectations that would focus, not narrow, the curricula, would support good instruction, and would be aligned with Montana's standards.

In the 2004–2005 academic year, reading and math GLEs were expanded to include students with significant cognitive disabilities. Similarly, in the 2006–2007 academic year, the same was done for the new content area, science. The resulting documents—*Montana Standards and Expanded Benchmarks for Reading*, *Montana Standards and Expanded Benchmarks for Math*, and *Montana Standards and Expanded Benchmarks for Science*—were used as a framework to create the CRT-Alternate Assessment.

Throughout the development process of both the *MontCAS Comprehensive Assessment System Grade Level Expectations* and the *Montana Standards and Expanded Benchmarks* documents, OPI has relied upon the expertise of Montana educators. These educators have helped guide the development of these documents and have made numerous insightful contributions in an effort to help support meaningful instruction in mathematics, reading, and science.

Item Review Committee

A committee of local educators is convened annually to review all of the items developed for the CRT and the CRT-Alternate Assessment. Committee member comments are solicited for each item. Each item is evaluated on the following criteria:

- alignment with the standard being measured,
- appropriateness for grade level,
- content accuracy, and
- depth of knowledge.

Bias and Sensitivity Committee

A committee of Montana educators also meets to review all reading passages and individual test items. Committee members determine if a passage or item is likely to place a particular group of students at an advantage or disadvantage for non-educational reasons; if so, a decision will be made to remove or revise the passage or item by OPI.

Technical Advisory Committee

A committee of nationally recognized test and measurement experts (psychometricians) meets regularly to ensure the technical integrity of the CRT and the CRT-Alternate Assessment.

CRT Test Design

Types of Items on CRT

In order to provide a valid assessment of students' attainment of the Montana standards and GLEs, a variety of item types needed to be used. Therefore, multiple-choice items, short-answer items, and constructed-response items were used as follows.

Multiple Choice (one point)

Multiple-choice items are efficient for testing a broad array of content in a relatively short time span.

Short Answer (one point—mathematics only)

These open-ended items ask students to generate a short response to a mathematics computation question.

Constructed Response (four points)

This is a more complex item type that requires students to give longer responses to items related to reading passages or to solve multistep mathematics problems.

Common and Field Test Items

There are eight versions, or forms, of the CRT created for each grade level tested in reading, mathematics, and science. Half of the items in each of the CRT forms were the same in every form, or were "common" to all forms of the test. All individual student results (performance levels, scaled scores, content area subscores) and school results are based only on common items. The other half of the items in each form were field tested. "Field testing" means distributing a large number of items among the different forms of the test. This approach allows for field testing of new items for subsequent years' tests and also allows some items to be administered in successive years for purposes of equating the tests from year to year.

Following each year's test administration, 50% all common items are publicly released to inform local curriculum and instruction. Released common items are replaced each year with some of the items from the previous year's field tested section.

CRT-Alternate Test Design

To provide an option for participation of all students in the state's accountability system, including those for whom a paper-and-pencil test is not appropriate, Montana has developed the CRT-Alternate Assessment. It is expected that only Individuals with Disabilities

Education Act (IDEA)–eligible students with the most significant cognitive disabilities will participate in the CRT-Alternate. The CRT-Alternate consists of test activities in reading and math for students in grades 3–8 and 10, and in science for grades 4, 8, and 10. The components of the test are identified below to provide an overview of the test and an introduction to terminology used to describe the test's structure. Each component of the test is described in detail in the *CRT-Alternate Administration Manual.*

Rubric

The scoring rubric is a matrix that describes various levels of achievement for each test item. It incorporates increasing levels of teacher support designed to elicit a correct response from the student. The rubric incorporates a numerical scale that extends from 0 to 4.

Scoring

The scoring system is guided by the rubric. Student performance on each item is scored based on the amount of assistance required to elicit the correct response. Scoring rules guide the administrator if the student is unresponsive, uncooperative, or repeatedly unsuccessful with test items.

Scaffolding

Scaffolding is a systematic process of providing increasing levels of assistance on each test item. The test booklet provides teacher instruction and suggested language to scaffold each test item.

Scoring

In May 2009, more than 800,000 Montana responses were processed and scored at Measured Progress. The scoring activities that were used to produce the results for the CRT reports are described below.

Scoring was separated into the following three major tasks:

- scoring of responses to multiple-choice items,
- scoring of responses to short-answer items, and
- scoring of responses to constructed-response items.

Scoring of Multiple-choice Items

Multiple-choice items were machine-scored using digital scanning equipment. Correct responses were assigned a score of 1 point each; incorrect or blank responses were assigned a score of 0 points each.

Scoring of Short-answer and Constructed-response Items

Short-answer and constructed-response items were scored by Measured Progress. Short-answer items were given a score of 0 or 1. Constructed-response items were given a score from 0 to 4. A score of 0 is given when a student produces some work, but the work is totally wrong or irrelevant, or if he or she leaves the item blank. For purposes of aggregating item results, blanks and scores of 0 both count as 0 points toward a student's score.

The work in preparation for scoring student responses included

- development of scoring guides (rubrics) by content specialists (educators) from the Montana and Measured Progress test developers and
- selection of "benchmark" responses—examples of student work at different score points for each item—that were used in training and continuous monitoring of scorer accuracy.

Scorer training consisted of

- review of each item and its related content and performance standard,
- review and discussion of the scoring guide and multiple sets of benchmark responses for each score point, and
- qualifying rounds of scoring in which scorers needed to demonstrate a prescribed level of accuracy.

Setting Standards for Performance on the CRT and CRT-Alternate Tests

Standard setting is the process of determining the minimum or "threshold" score for each performance level, grade, and subject for which results are reported. The multistep process of setting standards for the CRT and the CRT-Alternate Assessment began with creation of performance-level descriptors.

Standard-setting panels were convened at each grade level in reading and mathematics (grades 3–8 and 10) and science (grades 4, 8, and 10). More than 400 Montana educators, invited to participate by OPI, have composed standard-setting panels in order to set standards in each content area.

In 2008, OPI convened panels of educators to participate in a standard-setting process for the CRT and CRT-Alternate science assessments in grades 4, 8, and 10. Standards were set for reading and mathematics during the summer of 2006 for both the CRT and the CRT-Alternate Assessment in grades 3–8 and 10. In May 2009, an additional standards validation for the CRT-Alternate occurred for grades 4, 8, and 10 in reading and mathematics due to redevelopment in those grades and content areas.

A challenging aspect of standard setting is that many methods exist to set standards and establish cut points. With this in mind, OPI, in consultation with the Technical Advisory Committee and Measured Progress, determined that judgments would be employed for setting standards on the tests.

Upon completion of the data-gathering phases of standard setting described above and recommendations from the Technical Advisory Committee, the state superintendent of the Office of Public Instruction approved the recommended cut points.

CRT: Bookmark Standard-Setting Process

The bookmark method of standard setting is a multistep process. First, participants took the CRT as though they were students. Then, as a group, the panels reviewed the performance-level descriptors, paying special attention to

differentiating between knowledge, skills, and abilities typically associated with students described as being on the borderline between performance levels. Panelists then looked at "ordered item booklets," which show each common item on the test in order from easiest to hardest. The ordered item booklets also includes actual student work samples for each score point for constructed-response items. Participants made decisions about which items would differentiate between students at each performance level and placed a "bookmark" between those items to represent the cut point between performance levels. Small- and large-group discussions followed regarding the knowledge, skills, and abilities associated with the items around each cut point. Participants had the opportunity to change their placement of the bookmark based on these discussions. Finally, panelists had the opportunity to provide feedback on the performance-level descriptors.

CRT-Alternate: Body of Work Standard-Setting Process

The body-of-work method of standard setting for the alternate assessment is a multistep process. First, participants reviewed the CRT-Alternate Assessment and the scoring rubric, which determined how various responses to each item were scored. Then, as a group, the panelists reviewed the performance-level descriptors, paying special attention to differentiating between knowledge, skills, and abilities typically associated with students assigned to each of the performance levels. Panelists then looked at "ordered item lists," which show each common item on the test in order from easiest to hardest. The Ordered Item List participants were also given a set of student profiles, which showed the average response on each item of the entire test for students who received a score within a specific range. Participants reviewed each of the student profiles and made an individual determination as to which performance level each student profile should be assigned. Large-group discussions followed regarding the knowledge, skills, and abilities associated with the student profiles in each performance level. Participants had the opportunity to change their placement of any or all student profiles based on these discussions. Finally, panelists had the opportunity to provide feedback on the performance-level descriptors.

Reporting

The tests were designed to measure student performance against the learning goals described in *Montana Content Standards*. Consistent with this purpose, primary results on the tests are reported in terms of performance levels that describe student performance in relation to these established state standards. There are four performance levels: Advanced, Proficient, Nearing Proficiency, and Novice. Students receive a separate performance-level classification (based on total scaled score) in each content area (mathematics, reading, and science) in which they complete a test. There is no overall classification of student performance across content areas. School- and system-level results are reported as the number and percentage of students attaining each performance level at each grade level tested.

In addition to performance levels, CRT and CRT-Alternate results are also reported as scaled scores. The major purpose of including

scaled scores in reports is to enhance the level of feedback provided to students, parents, and teachers. Each of the four performance levels encompasses a range of student performance. A student whose test performance is just above Nearing Proficiency and a student whose level of performance is slightly below Proficient are both classified as Nearing Proficiency. However, scaled-score results are more precise since they pinpoint a student's performance (score) on the continuum of scores within the performance levels. The additional information provided by scaled scores is critical in forming the most accurate impression of performance possible.

Translating Raw Scores to Scaled Scores and Performance Levels

CRT and CRT-Alternate scores in each content area are reported on a scale that ranges from 200 to 300. Scaled scores supplement the performance-level results by providing information about the position of a student's results within a performance level. School- and system-level scaled scores are calculated by computing the average of student-level scaled scores. Students' raw scores, or total number of points, on the tests are translated to scaled scores using a data-analysis process called scaling. Scaling simply converts raw points from one scale to another. In the same way that the same temperature can be expressed on either the Fahrenheit or Celsius scales and the same distance can be expressed either in miles or kilometers, student scores on the tests could be expressed as raw scores (i.e., number right) or scaled scores.

It is important to note that converting from raw scores to scaled scores does not change the students' performance-level classifications. Given the relative simplicity of raw scores, it is fair to question why scaled scores are used in reports instead of raw scores. Foremost, scaled scores offer the advantage of simplifying the reporting of results across content areas, grade levels, and subsequent years. Because the standard-setting process typically results in different cut scores across content areas on a raw score basis, it is useful to transform these raw cut scores to a scale that is more easily interpretable and consistent. Using scaled scores greatly simplifies the task of understanding how a student performed.